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LASERTUBE LT14 FIBER

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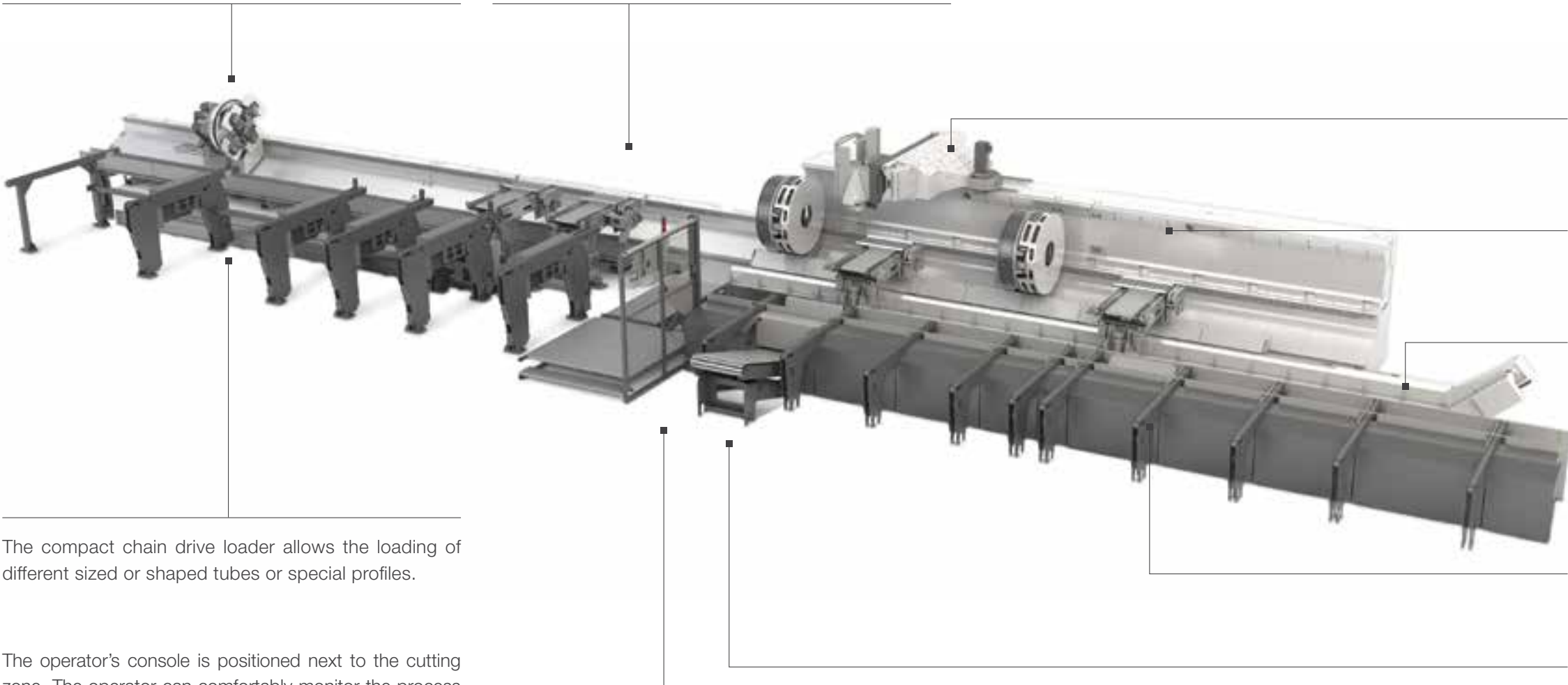
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3D laser cutting for large diameters

The chuck gripper axes are electrically controlled providing precise control for holding thin walled tubes and a secure grip on the heavier tubes.

The carriages are automatically positioned to allow maximum flexibility and optimize the loading / unloading cycles.



The compact chain drive loader allows the loading of different sized or shaped tubes or special profiles.

The operator's console is positioned next to the cutting zone. The operator can comfortably monitor the process and intervene quickly if necessary.

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tube diam. max. (Ø) 355 mm (14")
- processing tubes up to 100 kg/m (67 lb/ft) - loading and unloading lengths up to 18 m (60') - fully automatic adjustments - 3D cutting with fiber laser source - cuts tube and open or special profiles - cuts all metals including highly reflective alloys

The cutting head movement is controlled by five high speed CNC axes: this guarantees higher speed and accuracy.

The cutting head moves along the axis of the tube rather than moving the tube. This ensures higher precision and productivity.

A metal belted conveyor placed under the cutting area, automatically removes the cutting scrap.

The unloading chains serve dual purpose: separation and collection of cut parts in different locations.

Another metal belted conveyor continuously unloads shorter cut parts without interrupting the cutting process.



The positions of the three chucks are automatically managed during the cutting operation to minimize the work-piece movement. The cutting head moves over the entire length of the tube to perform the cutting operation with precision and speed.



The two passing chucks can move over the tube's entire length to support and grip the tube. The the cutting head can access the entire length of the tube and perform cutting operations at both ends thus eliminating end drops.



INFINITE UNLOADING POSITIONS

The unloading carriages move freely along the X axis and are capable of unloading the cut parts in any programmed position.

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Performance and flexibility

Loading and unloading during cutting process

The cutting area is segregated from the tube movement to ensure the highest level of safety, without slowing down production in any way. A double radiation protection barrier system permits the loading of the new tube and the unloading of the cut parts without interrupting the cutting cycle.

Production without collisions or drops

The support carriages move vertically as well as horizontally. The vertical movement is used to support the tube during the cutting process while the horizontal movement is used for to unload the cut parts in programmable locations along the X axis.



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Opportunities offered by fiber laser

Fiber laser dominates

The system is equipped with a 3 kW fiber laser (4 kW available as option). The fiber laser offers major advantages in both 2D and 3D cutting of stainless steel and aluminum. The reduced power consumption and the maintenance-free laser resonator make it the preferred choice over traditional CO₂ laser technology.

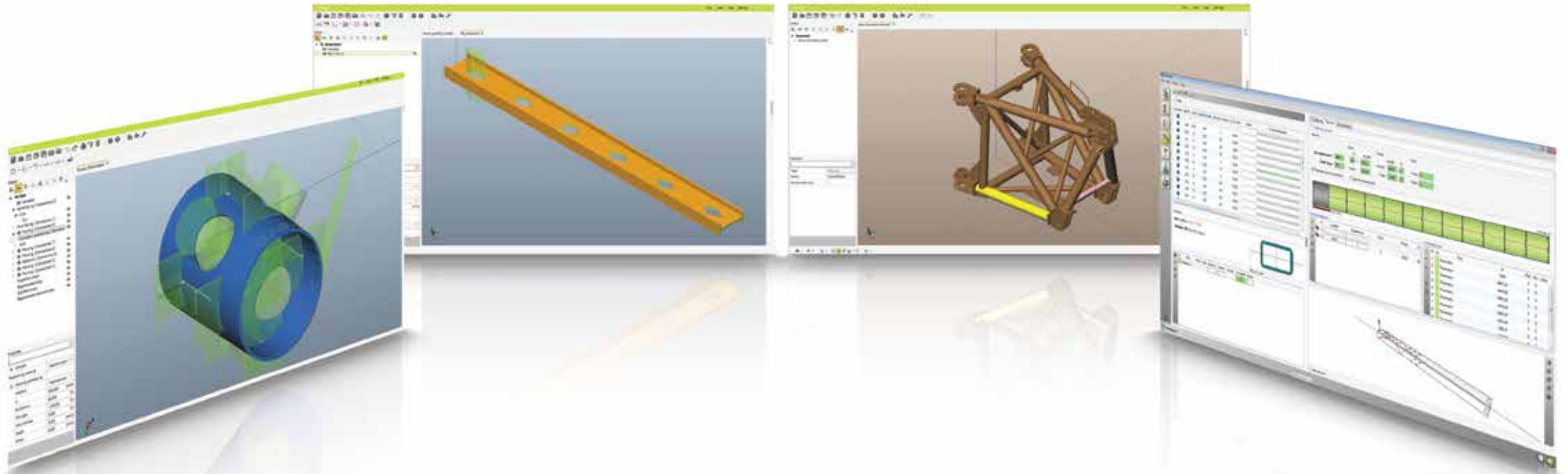


NOT ONLY STEEL
Fiber laser provides the capability to cut all metals including aluminum alloys, copper and brass.



SOFTWARE

Designing and manufacturing



Parts can either be drawn or CAD files can be imported then automatically translated into the most efficient part programs.

Going from concept to the part is quick and easy by using a fully three-dimensional, parametric programming system.

Standard shaped tubes, special sections and open profiles can be programmed in a simple, user-friendly manner.

Assemblies and complex structures using one or more tube sizes can be created at the same time.

Automatic joint creation between tubes of different diameter, thickness and shape simplifies the assembly of frames and structures.

Effective nesting of parts can be prepared off-line to minimise scrap.

Drawn parts can be previewed before transferring the part program to the machine.

Product batches consisting of one or more parts, each with unique quantities, can be defined using the part program archive.



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Configurability



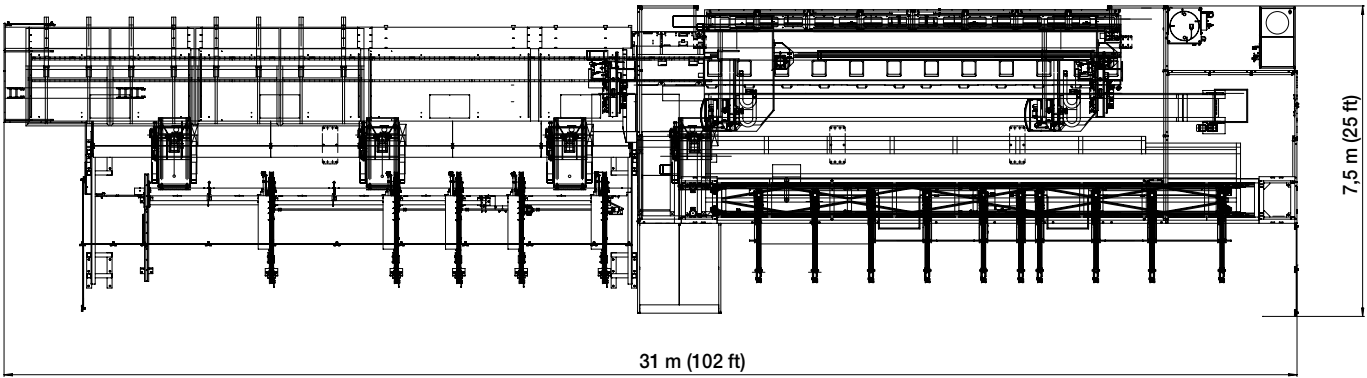
The system can be configured in a variety of load / unload lengths up to 18 meters (60') and equipped with additional capabilities. For example:

- **Weld seam detection:** the position of the weld seam is detected and the tube is oriented to the relative position as defined in the program.
- **Clean Tube or “spoon” option for round tubes:** a suction device is automatically positioned under the cutting head to extract the cutting debris and ensure a clean inner surface.
- **Touch probe measurement:** a measuring touch probe integrated on the cutting head detects the actual tube position and that data is used to calculate the corrections needed to compensate for the bow and twist in order to have the cut geometries in the desired position (centered on the axis or referenced to the edge).
- **Radial drilling and tapping:** a mechanical drilling and tapping attachment can be installed next to the cutting head. This additional capability reduces overall part cycle time, consolidates process steps, eliminates extra handling while improving the part precision and quality.

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Technical data

Round tube Ø	min. 30 mm - max. 355 mm (1" ¼ - 14")
Square tube	min. 30 x 30 mm - max. 260 x 260 mm (1.25" - 10")
Rectangular tube	min. 30 x 30 mm - max. 300 x 200 mm (1.25" x 1.25"- 8" x 12")
Open profiles	min. 80 x 80 mm - max. 260 x 260 mm (3" x 3" - 10" x 10")
Cutting thickness	16 mm (0.625")
Standard Materials	mild steel, stainless steel, aluminum, copper, brass (others on request)
Loadable bar length	max. 18 m (60 ft)
Unloadable part length	max. 18 m (60 ft)
Tube weight	max. 100 kg/m (67 lb/ft)
Laser source power	3kW Fiber (4kW optional)
Settings	fully automatic



☞ Features, weights, measures, capacities and machine performance descriptions are not binding and may be changed without prior notice. The photographs are only examples.

LASERTUBE CUTTING SYSTEM

tube bending
endforming
sawing, deburring and washing
cutting & end machining
combined sheet and tube laser cutting
handling
manufacturing cell
process control software



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